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(12) **United States Patent**
Barnett

(10) **Patent No.:** **US 6,343,276 B1**
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(54) **SHOE SIZE SCANNER SYSTEM**

PDT 3100 Series, 2000.*

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* cited by examiner

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

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(51) **Int. Cl.**⁷ **G06F 17/60**

(52) **U.S. Cl.** **705/28**

(58) **Field of Search** **705/22, 28**

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|-------------|---------|------------------|--------|
| 5,023,438 A | 6/1991 | Wakatsuki et al. | |
| 5,361,871 A | 11/1994 | Gupta et al. | |
| 5,878,401 A | 3/1999 | Joseph | 705/22 |
| 5,890,136 A | 3/1999 | Kipp | |
| 5,940,808 A | 8/1999 | Joseph | 705/22 |

FOREIGN PATENT DOCUMENTS

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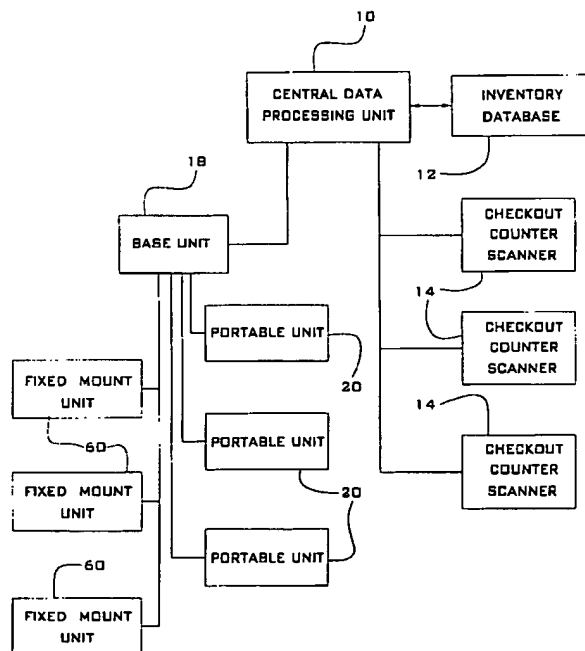
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"From Symbol Technologies 10-K for Dec. 31, 1997 Bar Code Scanning Products" <http://www.seinfo.com/d8Fqv.7d.htm>.*

George Kapsambelis, "The Changing Face of Portable Data Collection", Automatic ID News, Aug. 1999, pp. 16-17.*
PCK 9100 System, 2001.*

The shoe size scanner system is an automated system for use in retail stores, and particularly in shoe stores. The scanner system has a base unit which interfaces with the store's computerized inventory system, and a plurality of remote units which interface with the base unit. The remote units include at least the input device of a bar code scanner, and may be either fixed mount or portable, handheld scanning units. The fixed mount units are positioned in fixed locations, such as display shelves or tables and may be used by either store clerks or customers. The handheld units are intended for use by sales clerks, and may be supported by a neck strap, arm band, or belt clip. According to the shoe size scanner system, each shoe on display in the store has a bar code affixed thereto which encodes an identifier number corresponding to the model of the shoe. Either a sales clerk or a customer may scan the bar code with the remote unit, which communicates with the base unit and returns identification of the shoe model. The sales clerk or customer may then select one of three function keys so that the remote unit will display, for that particular model, either (1) a list of all shoe sizes in stock; (2) a response indicating whether the shoe is in stock in a specified length and width; or (3) a list of all shoe widths in stock in a specified length. Price information for each shoe listed in the response is provided.

18 Claims, 12 Drawing Sheets



DOCUMENT-IDENTIFIER: US 6343276 B1

TITLE: Shoe size scanner system

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BSPR:

U.S. Pat. No. 5,361,871, issued Nov. 8, 1994 to Gupta, et al., teaches a system which provides shoppers with remote portable units for reading Universal Price Code (**UPC**) bar codes, particularly for use in supermarkets where the remote units may be attached to shopping carts. The system includes a host computer, an intermediate computer and a plurality of remote units. The host computer periodically updates price information on the intermediate computer and also controls prices at checkout counters. The remote units include a microprocessor with RAM which receives updated price information from the intermediate computer. The shopper may scan the **UPC** on various items to determine the price, and may total the items scanned to determine what the total bill is. The Gupta device does not provide size or inventory information for items on display but stored in a stockroom.

BSPR:

U.S. Pat. No. 5,023,438, issued Jun. 11, 1991 to Wakatsuki, et al., shows a **portable pen-scanner** for reading bar codes when doing inventory work. The scanner includes a remote transmitter/receiver for wireless transmission of inventory order information from the scanner to a data processing device. U.S. Pat. No. 5,890,136, issued Mar. 30, 1999 to L. Kipp, describes a mass retail system for automated sales which includes an inventory database which is updated as sales are made. International Patent No. WO 97/26610, published Jul. 24, 1997, discloses a handheld computer unit by car salesmen which provides access to dealership inventory and the inventory of other dealerships.

DEPR:

The product identification number should be a unique number identifying the shoe on display, at least by manufacturer and model or style. According to the shoe size scanner system of the present invention, a bar code containing a symbolic representation of the product identification number is affixed to each shoe on display, as represented in FIG. 2 by a bar code label 16 adhesively attached to the sole of a shoe A. The bar code may be affixed to the shoe by the manufacturer, a wholesaler, or the retail store. The product identification number may be a Universal Price Code (**UPC**), a stock keeping unit (SKU), or a customized identification number used in the retail store's computerized inventory system. A conventional Version "A" **UPC** bar code

symbol,

e.g., is a twelve digit code in which the first six digits represent the manufacturer of the item, the next five digits represent the unique product, and the last digit is a check character. A UPC Version "E" bar code presents substantially the same number in fewer digits by suppressing redundant zeroes. A customized identification number may be used by the retailer to further uniquely identify the product, which may be printed on a bar code label and applied to the shoe on display by the retailer.

DEPR:

A block diagram of a portable unit 20 is shown in FIG. 4. Portable bar code scanners are well known in the art. Portable scanners may have a decoding unit

integral with the optical scanning unit, or the decoder may be in a separate physical unit, in which case the optical scanner is referred to as an input device. If the decoder is in a separate unit, the scanned data may be downloaded to the decoder by an RS-232 connection after all the data is scanned, or the scanned data may be transferred by radio wave communication to

an online decoder for real time communication with the base unit 18. The portable units 20 of the present invention are preferably of the latter variety.

CLPR:

5. The shoe size scanner system according to claim 1, wherein said portable remote scanner unit comprises a fixed beam bar code scanner.

CLPR:

6. The shoe size scanner system according to claim 1, wherein said portable remote scanner unit further comprises means for transporting said portable remote scanner unit about the person of a user.

CCOR:

705/28